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Nota di contenuto	Part I. Theory and Problems -- I.1 Basic Theory -- I.2 Topological Dynamics -- I.3 Low-Dimensional Dynamics -- I.4 Hyperbolic Dynamics -- I.5 Symbolic Dynamics -- I.6 Ergodic Theory -- Part II. Problems and Solutions -- II.1 Basic Theory -- II.2 Topological Dynamics -- II.3 Low-Dimensional Dynamics -- II.4 Hyperbolic Dynamics -- II.5 Symbolic Dynamics -- II.6 Ergodic Theory -- References -- Index.
Sommario/riassunto	This book comprises an impressive collection of problems that cover a variety of carefully selected topics on the core of the theory of dynamical systems. Aimed at the graduate/upper undergraduate level, the emphasis is on dynamical systems with discrete time. In addition to the basic theory, the topics include topological, low-dimensional, hyperbolic and symbolic dynamics, as well as basic ergodic theory. As in other areas of mathematics, one can gain the first working knowledge of a topic by solving selected problems. It is rare to find large collections of problems in an advanced field of study much less to discover accompanying detailed solutions. This text fills a gap and can be used as a strong companion to an analogous dynamical systems textbook such as the authors' own Dynamical Systems (Universitext, Springer) or another text designed for a one- or two-semester advanced undergraduate/graduate course. The book is also intended for independent study. Problems often begin with specific cases and

then move on to general results, following a natural path of learning. They are also well-graded in terms of increasing the challenge to the reader. Anyone who works through the theory and problems in Part I will have acquired the background and techniques needed to do advanced studies in this area. Part II includes complete solutions to every problem given in Part I with each conveniently restated. Beyond basic prerequisites from linear algebra, differential and integral calculus, and complex analysis and topology, in each chapter the authors recall the notions and results (without proofs) that are necessary to treat the challenges set for that chapter, thus making the text self-contained.

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